

3.4 BIOLOGICAL RESOURCES

This section describes the existing conditions of biological resources at the Plymouth Generating Facility (PGF) plant site and vicinity that could be affected by the project. The section also assesses the impacts to biological resources that would be attributable to the PGF construction and operation. The impact assessment process included contacts with federal and state agencies, literature review, and field surveys. Subjects addressed in this section include habitat types (including wetlands), threatened and endangered species, other wildlife species, and noxious weeds.

3.4.1 AFFECTED ENVIRONMENT

Field investigations of the project location were conducted in February and April 2002. The investigations consisted of traversing the proposed plant site and infrastructure corridors. Other potential high quality habitats in the site area were also visited. Major habitat types, descriptions, and locations, and plant and animal observations in the site area were recorded.

3.4.1.1 Site Area

For the Biological Resources evaluation, the site area studied included areas in both Washington and Oregon; however, the majority of the site area is in Washington. The site area is bounded on the north by State Route (SR) 14, on the south by the Columbia River, on the west by Christy Road, and on the east by the transmission river crossing corridor. The portion of the site area in Oregon consists of the area where the transmission river crossing corridor is located, from the southern bank of the Columbia River to where it connects with the BPA McNary Substation.

3.4.1.1.1 Habitats

Seven major habitat types occur in the site area: developed/residential/industrial, agricultural, nonnative grassland, shrub-steppe, wetland, riparian, and cliff (Figure 3.4-1). Each of the habitat types is described below.

Developed/Residential/Industrial

The developed/residential/industrial habitat occurs primarily near Christy Road and in the unincorporated community of Plymouth. This habitat type includes residential houses, pavement, and industrial complexes such as the Williams Northwest Gas Pipeline Company (Williams Co.) compressor station, the AgriNorthwest grain facility, and the McNary Substation in Oregon. The common vegetation in these habitats includes nonnative ornamental trees and shrubs, such as Lombardy poplars (*Populus nigra*) and nonnative grass species.

Agricultural

Agricultural habitats include areas where field crops and orchards occur. Common crops in the site area include apples, cherries, and grains. Agricultural habitats generally lack vegetative complexity and undergo the systematic disturbances associated with agricultural activities. Some agricultural land is currently fallow. Both actively cultivated and fallow areas have some scattered weeds such as common dandelion (*Taraxacum officinale*), blue mustard (*Chorispora*

tenella), henbit (*Lamium amplexicaule*), shepherd's-purse (*Capsella bursa-pastoris*), chickweed (*Stellaria media*), and dwarf mallow (*Malva neglecta*). The agricultural habitat is most common in the western half of the site area.

Nonnative Grassland

Nonnative grassland areas are composed of a mix of grasses and herbs typical of previously disturbed sites. Nonnative grassland habitat generally occurs in the site area adjacent to roads, transmission lines, and in the interstitial areas between crop circles. Common species in this habitat include cheat grass (*Bromus tectorum*), tumbleweed (*Salsola tragus*), diffuse knapweed (*Centaurea diffusa*), common yarrow (*Achillea millefolium*), crane's-bill (*Erodium cicutarium*), and tumbled mustard (*Sisymbrium altissimum*). Nonnative grassland is a very common habitat type in the site area.

Shrub-Steppe

Shrub-steppe habitat consists of plant communities with one or more layers of perennial grasses and a conspicuous but discontinuous layer of shrubs. The Washington Department of Fish and Wildlife (WDFW) considers high quality shrub-steppe to be a priority habitat. According to the WDFW, high quality shrub-steppe habitat includes a high percentage and distribution of native plants and a variety of habitat features such as riparian areas, canyons, and varied topography (WDFW 2002).

Shrub-steppe habitat in the site area is present in scattered patches. Concentrations of shrub-steppe habitat can be found south of SR 14 and between Plymouth Road and Interstate 82 (I-82) and south of Christy Road. Shrub-steppe habitat is also found in Fourmile Canyon, a drainage channel that runs north to south through the site area.

Common shrub species in the shrub-steppe habitat type include tall sagebrush (*Artemisia tridentata*), gray rabbitbrush (*Ericameria nauseosa*), and green rabbitbrush (*Ericameria viscidiflora*). Common herbs include a mix of native and nonnative species such as cheat grass, Sandberg's bluegrass (*Poa sandbergii*), bulbous bluegrass (*Poa bulbosa*), diffuse knapweed, tumbleweed, spring Whitlow-grass (*Draba verna*), gold star (*Crocidium multicaule*), yellow bell (*Fritillaria pudica*), midget phlox (*Microsteris gracilis*), jagged chickweed (*Holosteum umbellatum*), and prickly-pear (*Opuntia polyacantha*).

The shrub-steppe habitat in Fourmile Canyon and south of Christy Road is not considered high quality due to the abundance of nonnative species, the lack of habitat features, and the history of disturbance. The shrub-steppe habitat present between Plymouth Road and I-82 is identified as a priority habitat by the WDFW. The WDFW has identified the area west of Plymouth Road as a priority shrub-steppe habitat. However, field examination revealed that this area is a nonnative grassland habitat type, not shrub-steppe.



Legend

- Proposed Rail Off-Load Platform
- Wetlands
- Proposed Plymouth Generating Facility
- BPA Transmission Right-of-Way
- Alternate Benton PUD/BPA Transmission Interconnection
- Proposed and Alternate 230 kV Transmission Interconnection
- Access Alternative
- Proposed Access Road
- Water Supply / Wastewater Pipeline
- Fourmile Canyon
- BNSF Railway/Rail Siding



Figure 3.4-1 (Continued)

Wetlands

Wetlands in the site area are located along the Columbia River and near the existing Benton Public Utility District (PUD) transmission line. The wetlands along the transmission line are located just west of Plymouth Road and between Plymouth Road and I-82. The wetlands in this area are five small, isolated palustrine wetlands. The forested portions of the wetlands are dominated by such species as black cottonwood (*Populus balsamifera* ssp. *trichocarpa*) and Russian-olive (*Elaeagnus angustifolia*). The scrub/shrub portions are dominated by coyote willow (*Salix exigua*) and other willow species (*Salix* spp.). The emergent portions are dominated by cattail (*Typha latifolia*), hardstem bulrush (*Scirpus acutus*), and three-square bulrush (*Scirpus americanus*). The WDFW identifies these wetlands as priority habitats.

The wetlands along the Columbia River are palustrine emergent (herbaceous) wetlands dominated by such species as cattail and reed canarygrass (*Phalaris arundinacea*). Patches of forested wetlands also occur along the banks of the Columbia and include black cottonwood, aspen (*Populus tremuloides*), and coyote willow. A complex of forested and emergent wetlands is present along the Columbia River in Oregon, near the McNary Substation. In addition to previously noted species, black locust (*Robinia pseudo-acacia*) and false indigo (*Amorpha fruticosa*) are present in forested portions. There are several open water ponds associated with the wetlands.

Riparian

Riparian habitat is associated with streams or other water bodies. Within the site area riparian habitats occur along the Columbia River. The dominant species in forested riparian habitats in the site area is black cottonwood. Other common species include aspen, willow, and false indigo. The WDFW has identified most of these riparian areas as priority habitats.

Cliffs

Cliff areas over 25 feet high and below 5,000 feet in elevation are identified by the WDFW as priority habitats. Priority cliff habitat is located in one section of the site area. This cliff area is south of Silusi Butte and east of I-82. The cliff is almost vertical and overlooks the Columbia River.

3.4.1.1.2 Threatened and Endangered Species

As part of agency consultation, the National Marine Fisheries Service (NMFS); the Ephrata, Washington, office of the United States Fish and Wildlife Service (USFWS); Washington Department of Natural Resources (WDNR); and WDFW were contacted to obtain records of special-status species in the vicinity of the site area. A small portion of the site area is also in Oregon near the McNary Substation. The Portland, Oregon, office of the USFWS and the Oregon Natural Heritage Program (ONHP) were contacted to obtain records of special-status species in the vicinity of the McNary Substation. Copies of letters received from these agencies can be found in Appendix D.

For this document, discussion of both federal and state endangered, threatened, proposed, and candidate species, as well as federal species of concern and state sensitive species is included.